

CLAIMS

1. A road vehicle comprising at least one strengthening member fixed to a structure of the vehicle and extending in front of the driver's position, wherein the strengthening member is dimensioned so that it will not prevent the driver seeing an object which is at least two metres from the front windscreen, when the driver uses binocular vision and without requiring the driver to move the driver's head.
2. A road vehicle according to claim 1, wherein the strengthening member is mounted within the passenger-carrying compartment of the road vehicle.
3. A road vehicle according to claim 1 or 2, wherein the strengthening member extends between the front structure of the vehicle and a top frame of the front windscreen.
4. A road vehicle according to any preceding claim, when the strengthening member has the form of triangular prism which has been sheared in a vertical plane or a truncated sheared triangular pyramid.
5. A road vehicle according to any preceding claim, wherein the strengthening member is formed of at least two first linearly extending structural units extending from the front structure of the vehicle to the top frame of the front windscreen and second linearly extending structural unit joining the at least two first linearly extending units.
6. A road vehicle according to claim 5, wherein the second structural units are not horizontal.
7. A road vehicle according to claim 5 or 6, wherein the first linearly extending structural units of the strengthening member have a width not exceeding 65mm, preferably not exceeding 50mm in the horizontal plane.

8. A road vehicle according to any preceding claim, wherein the strengthening member does not contact the front windscreen along the whole length of the strengthening member.
9. A vehicle comprising at least one strengthening member which, in a first, storage position is retracted and in a second, extended position, extends between structures of the vehicle, and operating means for moving the strengthening member from the first position to the second position, wherein, if the reinforcing member is for extending adjacent a front windscreen in the extended position, it permits the driver to see through the front windscreen in the second position.
10. A vehicle according to Claim 9, being a passenger carrying road vehicle.
11. A road vehicle according to claim 9 or 10, wherein the strengthening member in the first and second position is mounted inside the passenger compartment of the vehicle.
12. A road vehicle according to claim 9, 10 or 11 wherein the operating means comprises detector means for determining if a vehicle has impacted an object or if the vehicle is starting to rotate at a dangerous angle, or if the vehicle is about to impact an object in front of the vehicle.
13. A road vehicle according to claim 9-12, wherein, in the second position, the strengthening member extends adjacent the front windscreen and behind it.
14. A road vehicle according to any of claims 9 to 13, wherein the operating means is for moving the strengthening member from the first position to the second position in a time period of less than 1 second.
15. A road vehicle according to any of claims 9 to 14, wherein the strengthening member is moved from the first position to the second position by pivoting, sliding or extending in linear direction.

16. A strengthening member for use in a road vehicle, for fixing to a structure of the vehicle, and for extending in front of the driver's position, the strengthening member being dimensioned so that, when in use, it will not prevent the driver seeing an object which is at least 2m from the front windscreen, when the driver uses binocular vision and without requiring the driver to move the driver's head.

17. A strengthening structure for mounting in a vehicle, the strengthening structure comprising a strengthening member and operating means for moving the strengthening member from a first, storage position to a second, extended position, the operating means and the strengthening member being configured to engage structures of the vehicle.

18. A strengthening member for mounting in a vehicle, formed of at least two first linearly extending structural units for extending from the front structure of the vehicle and second linearly extending structural unit joining the at least two first linearly extending units, the second structural units being not horizontal, and wherein the first linearly extending structural units of the strengthening member have a width not exceeding 65mm, preferably not exceeding 50mm in the horizontal plane.

19. A road vehicle substantially as herein described with reference to the accompanying drawings.

20. A strengthening member for a vehicle, substantially as herein described with reference to the accompanying drawings.

21. A strengthening structure for a vehicle, substantially as herein described with reference to the accompanying drawings.